

CLAIMS

1. (Currently Amended) A method comprising:
analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object; ~~and~~
automatically eliminating views with an information content below a threshold;
and
defining an access mechanism to permit the plurality of views to be accessed.
2. (Original) The method of claim 1 wherein defining comprises:
automatically creating an adjusted scale representation of each view of interest;
and
associating the adjusted scale representation with an actuatable control.
3. (Original) The method of claim 1 further comprising:
rendering a representation of the three dimensional object from the data file; and
automatically translating the object to a corresponding view of interest responsive to an actuation of a control associated with a corresponding representation.
4. (Original) The method of claim 1 wherein the plurality of views includes all six orthogonal views.
5. (Canceled)
6. (Currently Amended) The method of claim 5~~1~~ wherein the information content is determined relative to other views.
7. (Currently Amended) ~~The~~ A method of claim 1 ~~further comprising:~~

analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object;

defining an access mechanism to permit the plurality of views to be accessed; and
permitting a user to create an additional access mechanism and associate a user specified view with the additional access mechanism.

8. (Original) The method of claim 1 further comprising:

automatically creating a sequence for presenting the plurality of views in a prescribed manner.

9. (Original) The method of claim 8 further comprising:

automatically presenting the sequence responsive to an event.

10. (Original) The method of claim 1 wherein the characteristic is one of:

shape of the object, texture map of the object, indicia of the object, local detail of the object, and color of the object.

11. (Currently Amended) ~~The~~ A method comprising: of claim 1 wherein analyzing the data comprises:

analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object;

defining an access mechanism to permit the plurality of views to be accessed;

wherein analyzing includes detecting symmetry of the object; and

automatically determining a primary axis of orientation for presentation of the object.

12. (Currently Amended) ~~The~~ A method comprising: ~~of claim 1 wherein analyzing the data comprises:~~

analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object; and
automatically identifying homogeneity exceptions in the object.

13. (Original) The method of claim 11 wherein analyzing the data further comprises:
determining volumetric distribution of features of the object.

14. (Original) A method comprising:
rendering a three dimensional representation of an object from a data file;
accepting a definition of a feature of interest;
searching the data file for a region substantially conforming to the definition; ~~and~~
displaying an orientation and magnification that permits viewing of the feature;
tracking user behavior when viewing the representation of the three dimensional object;
inferring from the behavior a view of interest; and
defining an access mechanism to subsequently permit the view to be automatically accessed.

15. (Original) The method of claim 14 wherein the definition is given by one of:
at least one stock criterion;
at least one user-specified criterion; and
a combination of user specified and stock criteria.

16. (Original) The method of claim 14 wherein the definition includes at least one of:
——geometrical shape of the object, surface texture of the object, indicia of the object, and local detail of the object.

17. (Original) The method of claim 14 further comprising:
highlighting the feature of interest in the orientation and magnification displayed.

Claim 18 (Canceled).

19. (Currently Amended) The method of claim ~~18~~ 14 wherein the view includes a specific orientation and a specific magnification.

Claims 20-35 (Canceled).

36. (Currently Amended) ~~The~~ A method ~~of claim 1~~ further comprising:
analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object;
defining an access mechanism to permit the plurality of views to be accessed
displaying a representation of the three dimensional object in a viewing window;
determining if movement of a control device is within a tolerance range; and
automatically constraining rotation of the representation to a single axis if the movement is within the tolerance range.

37. (Original) The method of claim 36 wherein the tolerance range is a function of recent activity.

38. (Currently Amended) The method of claim 1 further comprising:

displaying a representation of the three dimensional object in a viewing window;
and

automatically providing a scale indicator that relates to an actual dimension of
the three-dimensional object.

39. (Original) The method of claim 38 wherein the scale indicator is one of
dimension lines, coordinates, a grid, and a reference object.

40. (Previously Presented) The method of claim 1 further comprising:
displaying a representation of the three dimensional object in a viewing window;
and
automatically providing a color reference to allow for calibration of color of a
display device.

41. (Previously Presented) The method of claim 1 further comprising:
displaying a representation of the three dimensional object in a viewing window;
and
automatically selecting a display background based on at least one characteristic
of the object.

42. (Previously Presented) The method of claim 1 further comprising:
analyzing a data file representing the three dimensional object to automatically
identify at least one observable characteristic of the three dimensional object;
rendering a representation of the three dimensional object from the data file; and
automatically adjusting a virtual light source to light the representation to
improve visibility of a characteristic of interest.

43. (Currently Amended) A machine readable medium having stored thereon instructions which when executed by a processor cause the machine to perform operations comprising:

analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object; and

defining an access mechanism to permit the plurality of views to be accessed;

tracking user behavior when viewing a representation of the three dimensional object;

inferring from the behavior a view of interest; and

defining an access mechanism to subsequently permit the view to be automatically accessed.

44. (Currently Amended) A machine readable medium having stored thereon instructions which when executed by a processor cause the machine to perform operations comprising:

rendering a three dimensional representation of an object from a data file;

accepting a definition of a feature of interest;

searching the data file for a region substantially conforming to the definition; and

displaying an orientation and magnification that permits viewing of the feature;

tracking user behavior when viewing the representation of the three dimensional object;

inferring from the behavior a view of interest; and

defining an access mechanism to subsequently permit the view to be automatically accessed.

Claim 45 (Canceled).

46. (Currently Amended) The machine readable medium of ~~claim 43~~ having stored thereon ~~further~~ instructions which when executed by a processor cause the machine to perform operations comprising:

analyzing a data file representing a three dimensional object to automatically identify a plurality of views of interest based on at least one observable characteristic of the three dimensional object;

defining an access mechanism to permit the plurality of views to be accessed;

displaying a representation of the three dimensional object in a viewing window;

determining if movement of a control device is within a tolerance range; and

automatically constraining rotation of the representation to a single axis if the movement is within the tolerance range.